DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-019446
Date Inspected: 11-Jan-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name: See Below

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:
CWI Inspector: Mr. Yu Jiao

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication.

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Wang Jinjiu stencil 043661 used shielded metal arc welding procedure specification WPS-B-P-2114-TC-U4B-FCM-1 to perform OBG segment 14E weld SEG3019Z-004. This QA Inspector measured a welding current of approximately 155 amps and the base materials had been preheated with electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Chen Ren Zhi, stencil 058087 used shielded metal arc welding procedure specification WPS-345-SMAW-4G(4F)-FCM-Repair-1 to make OBG segment 13AE weld repair SEG3007K-039. This QA Inspector measured a welding current of approximately 160 amps and Mr. Chen Ren Zhi appeared to be certified to make this weld. This weld repair was the result of ultrasonic rejections and was documented on weld repair B-WR-19132. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Zhengbin, stencil 216086 used shielded metal arc welding procedure WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make a weld repair of ultrasonic rejections to OBG segment 13AE weld SEG3007AT-095. ZPMC had issued weld repair document B-WR-18919 that documents the repair of this weld. This QA Inspector observed ZPMC QC has recorded a welding current of 155 amps, 24.5 volts and a welding travel speed of 102 mm per minute. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yang Yunfeng, stencil 215553 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-FCM-Repair to make a weld repair of ultrasonic rejections to OBG segment 13AE weld SEG3007AV-079. ZPMC had issued weld repair document B-WR-18919 that documents the repair of this weld. This QA Inspector measured a welding current of approximately 240 amps. QA observed the base material was preheated with electric heaters and Mr. Yang Yunfeng appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Xiang Rong, stencil 066763 prepared to use ESAB flux cored welding procedure specification WPS-B-T-2231-ESAB to make segment 14E plate SA3324A stiffener plate welds SEG3019K-1-015, 016, 017, 018 and 019. This QA Inspector observed the weld joints had been backgouged and each of the carbon arc weld grooves had not all been ground to a bright surface as required by AWSD1.5 paragraph 3.2.6 which states: “Air carbon arc gouged surfaces shall be ground to bright metal”. This QA Inspector showed ABF CWI Mr. Yu Jiao and ZPMC QC Inspector Mr. Zhong Guo Hui these weld joint surfaces and they both said no welding would be performed this shift and dayshift workers will grind these weld joints prior to performing any welding. See the photographs below for additional information.

This QA Inspector observed ZPMC welder Mr. Qie Jian Zhou, stencil 067571 used shielded metal arc welding procedure specification WPS-B-P-2214-B-U2-FCM-1 to make OBG segment 13CE welds SEG3011E-428. This QA Inspector measured a welding current of approximately 150 amps and Mr. Qie Jian Zhou appeared to be certified to make this weld. ZPMC had used electric heaters to preheat the base material of this weld joint. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Yong Shui, stencil 067656 used shielded metal arc welding procedure specification WPS-B-P-2114-TC-U4B-FCM-1 to perform OBG segment 14E weld SEG3019AL-295. This QA Inspector measured a welding current of approximately 155 amps and the base materials had been preheated with electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Cao Xinglong, stencil 069683 used shielded metal arc welding procedure specification WPS-B-P-2114-TC-U4B-FCM-1 to perform OBG segment 14E weld SEG3019AL-008. This QA Inspector measured a welding current of approximately 160 amps and the base materials had been preheated with electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents

This QA Inspector observed ZPMC welder Mr. Ni Lei Jiang stencil 037723 used shielded metal arc welding procedure specification WPS-B-P-2114-TC-U4B-FCM-1 to perform OBG segment 14E weld SEG3019AL-009.

This QA Inspector measured a welding current of approximately 155 amps and the base materials had been preheated with electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yang Yunfeng, stencil 215553 used shielded metal arc welding procedure WPS-345-SMAW-2G(2F)-FCM-Repair to make a weld repair of ultrasonic rejections to OBG segment 13AE weld SEG3007L-045. ZPMC had issued weld repair document B-WR-18556 that documents the repair of this weld. This QA Inspector observed a welding current of approximately 165amps. Mr. Yang Yunfeng used an electric grinder to clean the weld surfaces, the base material were preheated with electric heaters and he appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Xiang Rong, stencil 066763 used ESAB used flux cored welding procedure WPS-345-FCAW-3G(3F)-ESAB-Repair to make OBG segment 14E critical weld repair SEG3019L-1-077. This QA Inspector observed a welding current of approximately 225 amps, 24.0 volts and Mr. Zhang Xiang Rong appeared to be certified to make this weld. ZPMC had issued critical weld repair document B-CWR-2643 that documents the repair of this weld. Prior to welding ZPMC used electric heaters to preheat the base material of this weld joint. Items observed on this date appeared to generally comply with applicable contract documents.

WELDING INSPECTION REPORT

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Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact James Devey +8615000026784, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer